

AMENDMENTS TO THE CLAIMS:

1. (Previously Presented) A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recorded on the guiding track, the system comprising:

a first photodetector having photodetecting elements divided at least by a first dividing line optically parallel with a tangential direction of the information writing track of the disc for detecting reflected light of a first laser beam irradiated to the information writing track;

a plurality of adders for adding outputs of the photodetecting elements on each side of the first dividing line of the first photodetector;

a second photodetector having photodetecting elements divided at least by a second dividing line optically parallel with the tangential direction for detecting reflected light of a second laser beam irradiated to the guiding track;

a plurality of adders for adding outputs of photodetecting elements on each side of the second dividing line of the second photodetector;

first difference signal producing means for producing a first difference signal based on a difference between the added outputs of the photodetecting elements of each side of the first photodetector being divided by the first dividing line;

second difference signal producing means for producing a second difference signal based on a difference between the added outputs of the photodetecting elements of each side of the second photodetector being divided by the second dividing line;

level adjust means for adjusting a level of at least the second difference signal,
and

tracking error signal producing means for producing a tracking error signal based
on subtracting an output signal of the level adjust means from the first difference signal.

2. (Previously Presented) The reading system according to claim 1,
wherein

the second photodetector is further divided by a third dividing line optically
parallel with a radial direction of the optical disc;

third difference signal producing means is provided for producing a third
difference signal based on a difference between the added outputs of photodetecting
elements of each side divided by the third dividing line, the prepit information being
obtained based on the third difference signal.

Claims 3-4 (Canceled)

5. (Previously Presented) The reading system according to claim 1, wherein
the level adjust means comprises a multiplier.

6. (Currently Amended) A reading system for reading a writable optical
disc having an information writing track, a guiding track for introducing a laser beam to
the information writing track, and prepit information including address information
recording on the guiding track, the system comprising:

light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

prepit information detecting means for detecting prepit information;

a preliminary tracking error signal producing means for producing a preliminary tracking error signal including an influence of the prepit information based on an output of the light receiving means;

removing means for removing ~~[[an]]~~ the influence of the prepit information ~~based on the tracking error signal and an output of the prepit information detecting means~~ from the preliminary tracking error signal and outputting an original tracking error signal.

7. (Previously Presented) The reading system for reading a writable optical disc according to claim 6, wherein

the light receiving means is a detector having divided four elements.

8. (Previously Presented) The reading system for reading a writable optical disc according to claim 7, wherein the removing means comprises:

noise extracting means for extracting a noise component from the prepit information; and

a subtractor for subtracting a noise component from the tracking error signal.

9. (Currently Amended) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded

with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting circuit which detects the prepit information;

a preliminary tracking error signal producing circuit which produces a preliminary tracking error signal including an influence of the prepit information based on an output of the light receiving circuit; and

a removing circuit which removes ~~[[an]]~~ the influence of the prepit information ~~based on an output of the prepit information detecting circuit~~ from the preliminary tracking error signal and outputs an original tracking error signal.

10. (Previously Presented) The reading system according to claim 9, wherein the light receiving circuit is a detector divided into four elements.

11. (Previously Presented) The reading system according to claim 9, wherein the removing circuit comprising:

a noise extracting circuit which extracts noise component from the prepit information; and

a subtractor which subtracts the noise component from the tracking error signal.

12. (Previously Presented) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a first photodetector having a first photodetecting element and a second photodetecting element divided by a first line optically parallel with a tangential direction of the information writing track, which detects reflected light of a first laser beam irradiated to the information writing track;

a first subtracting circuit which produces a first difference signal based on outputs of the first photodetecting element and the second photodetecting element of the first photodetector;

a second photodetector having a third photodetecting element and a fourth photodetecting element divided by a second line optically parallel with a tangential direction of the information writing track, which detects reflected light of a second laser beam irradiated to the guiding track including the prepit information;

a second subtracting circuit which produces a second difference signal based on outputs of the third photodetecting element and the fourth photodetecting elements of the second photodetector;

a level adjusting circuit which adjusts a level of the second difference signal; and

a tracking error signal generating circuit which generates a tracking error signal based on the first difference signal and an output of the level adjusting circuit.

13. (Previously Presented) The reading system according to claim 12, further comprising a prepit detection circuit which generates a prepit signal based on an output of the second photodetector.

14. (Previously Presented) The reading system according to claim 13, wherein the second photodetector is further divided by a third line optically parallel with a radial direction of the optical disc, and wherein the prepit detection circuit generates the prepit signal by subtracting an output of one side of the second photodetector divided by the third line from an output of another side of the second photodetector divided by the third line.

15. (New) The reading system for reading a writable optical disc, according to claim 6, wherein the influence of the prepit information comprises a noise component.

16. (New) The reading system according to claim 9, wherein the influence of the prepit information comprises a noise component.

17. (New) A reading system for reading a writable optical disc having an information writing track, a guiding track for introducing a laser beam to the information writing track, and prepit information including address information recording on the guiding track, the system comprising:

light receiving means for receiving a reflected light of a laser beam irradiated to the information writing track of the optical disc;

prepit information detecting means;

tracking error signal producing means for producing a tracking error signal based on an output of the light receiving means; and

removing means for removing a noise component of the prepit based on an output of the prepit information detecting means, from the tracking error signal.

18. (New) A reading system for reading a writable optical disc having an information writing track and a guiding track for introducing a laser beam to the information writing track, wherein the guiding track has prepit information recorded with a first pattern and a second pattern having a predetermined phase difference from the first pattern so that the prepit information in the neighboring guiding tracks do not overlap in the radial direction, said reading system comprising:

a light receiving circuit which receives a reflected light of a laser beam irradiated to the information writing track of the optical disc;

a prepit information detecting circuit which detects the prepit information;

a tracking error signal producing circuit which produces a tracking error signal based on an output of the light receiving circuit; and

a removing circuit which removes a noise component of the prepit, based on an output of the prepit information detecting circuit, from the tracking error signal.